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WHITE RIVER SHALE OIL CORPORATION

SUITE 500 PRUDENTIAL BUILDING, 115 SOUTH MAIN STREET
SALT LAKE CITY, UTAH 84111
(801) 363-1170

January 26, 1983

RECEIVED
JAN 28 1983
DIVISION OF
OIL, GAS & MINING

Mr. Dean Evans
Bookcliffs Area Manager
Bureau of Land Management
170 South 500 East
Vernal, Utah 84078

JIM

JAN 28 1983

Dear Mr. Evans:

As discussed at the January 25, 1983 meeting between the White River Shale Oil Corporation (WRSOC), Western Fuels and BLM, WRSOC plans to remove clay borrow material from federal land. The entire clay borrow area is within the construction corridor of the Western Fuels Coal Transportation System to the Bonanza Power plant. The clay is required for the core of the runoff retention dam to be built at WRSOC's White River Shale Project south of Bonanza, Utah. The proposed clay borrow area is in Section 22, (Township 8 South, Range 24 East) and is shown on Attachment 1.

The State of Utah has also identified a clay borrow source on BLM-administered land in the vicinity of the proposed WRSOC borrow site. The State has determined that no conflict exists between their borrow sites and the WRSOC site. Enclosed is a copy of a letter received from Mr. Paul Gillette of the Utah Division of Water Resources (Attachment 2). WRSOC is presently negotiating with Western Fuels for permission to extract borrow from their construction corridor, and an agreement will be reached soon. WRSOC expects to receive a letter from Western Fuels which documents our agreement during the week of February 1, 1983. A copy of this letter as well as a topographical map of the borrow area will be submitted to BLM.

WRSOC herein requests BLM approval to remove approximately 45,000 cubic yards of clay from the site shown on Attachment 1. Further details concerning site access, borrow removal, and environmental considerations are presented below.

Borrow Site Access

Borrow site access will be via the existing one-lane, one-mile long dirt road that runs from Highway 45 near the border of Sections 26 and 27, to an abandoned drill hole within the borrow site (Attachment 1). The road will be upgraded to accomodate two-way construction traffic. Minor grading will be done on the level sections of the road. Road widening will be limited to 10 feet on each side, although the actual work area may extend to 50 feet on each side. Gravel may be placed on the road, depending on the conditions encountered during construction and use. Two or three culverts will be placed along the graded portions of the road to facilitate drainage. Disturbed areas will be reclaimed and revegetated as described in the Western Fuels Coal Transportation System Environmental Impact Statement (Westen Fuels EIS, see Attachment 3), except for the road itself. This constitutes a minor change from the Western Fuels EIS, which states that all roads will be restored. The subject road, however, is an existing road and should be left as access to the area. WRSOC will coordinate with Western Fuels and the BLM on this matter.

Clay Borrow Site

Approximate limits of the proposed WRSOC clay borrow site, designated Area C-3, are shown on Attachment 2. Test pit locations are shown on Attachment 4. Summary logs of the test pits and the test pit legend and notes are presented in Attachments 5 and 6, respectively.

The borrow area includes approximately 53 acres. Topsoil and overburden/unsuitable material will be removed to reach the depth of the clay (see Attachment 5) and stockpiled separately. Approximately 45,000 cubic yards of clay will be removed in approximate one-foot lifts.

Environmental Considerations

The proposed WRSOC borrow area should not require additional environmental assessment for BLM approval. The borrow area has been approved for construction uses since it is included in the construction corridor approved by the BLM for the Western Fuels Coal Transportation System. Erosion control, site restoration, and rehabilitation of the WRSOC borrow site will be conducted as described in the Westen Fuels EIS (see Attachment 3).

Summary

WRSOC herein requests permission from the BLM to extract clay borrow from within the Western Fuels railway construction corridor. The clay will be used as core material for the White River Shale Project runoff retention dam. Necessary permits for dam construction have been received from the BLM, Oil Shale Office, State Engineer, Utah Bureau of Water Pollution Control and Uintah County.

WRSOC would like to begin borrow removal as soon as possible in order to meet our dam construction schedule. Consequently, your expeditious approval of this application is requested.

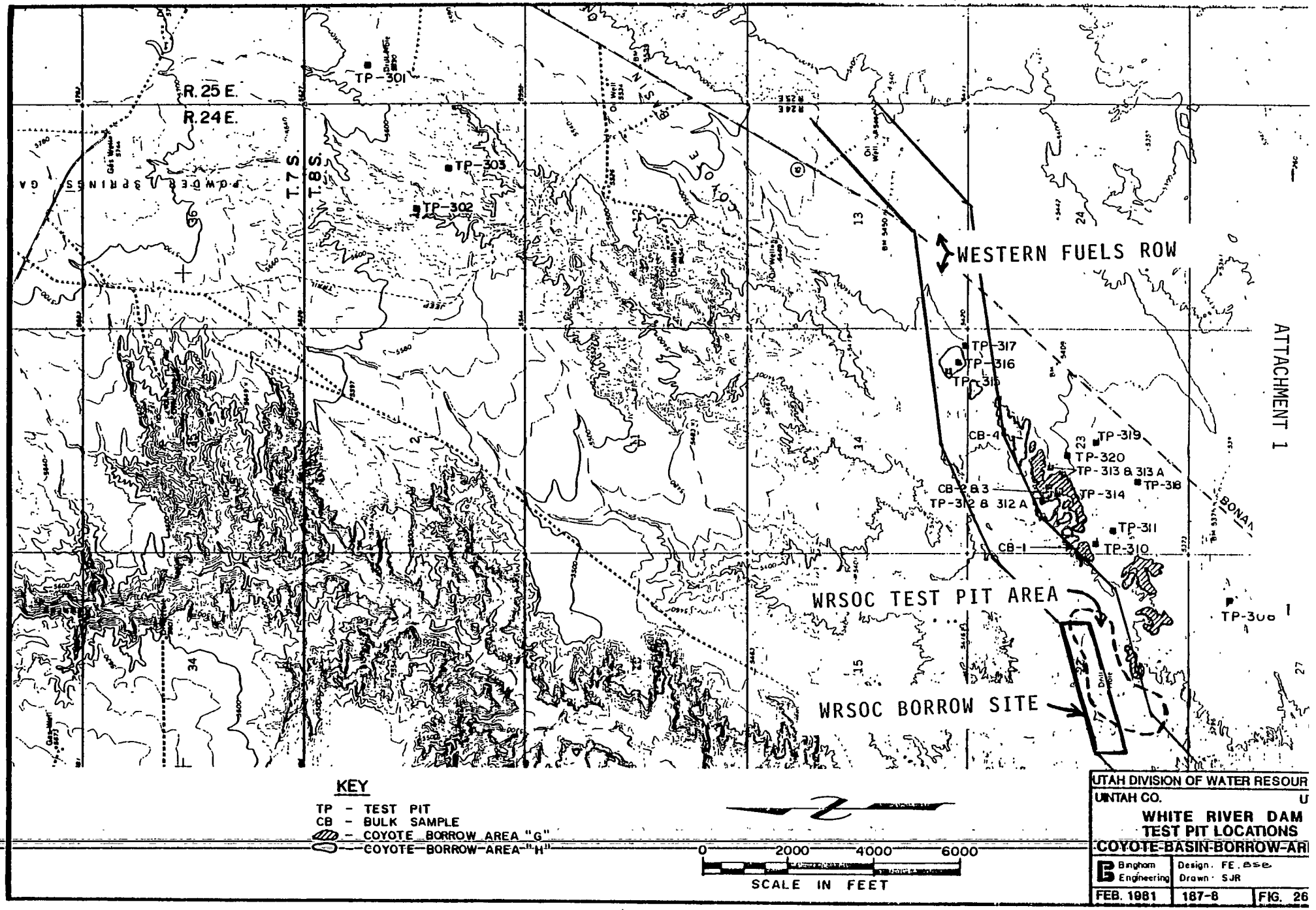
Sincerely,

James W. Godlove
Director of Environmental Affairs

RAD:JWG/mej

Attachments

cc: Eric Hoffman - OSO
Jim Smith - DOGM


R. 25 E.
R. 24 E.
T. 7 S.
T. 8 S.
TP-301
TP-303
TP-302
WESTERN FUELS ROW
TP-317
TP-316
TP-315
CB-4
TP-319
TP-320
TP-313 & 313 A
TP-318
CB-2 & 3
TP-312 & 312 A
TP-314
TP-311
CB-1
TP-310
TP-308
WRSOC TEST PIT AREA
WRSOC BORROW SITE
BONANZA
ATTACHMENT 1
KEY
TP - TEST PIT
CB - BULK SAMPLE
COYOTE BORROW AREA "G"
COYOTE BORROW AREA "H"
0 2000 4000 6000
SCALE IN FEET
UTAH DIVISION OF WATER RESOUR
UINTAH CO.
WHITE RIVER DAM
TEST PIT LOCATIONS
COYOTE-BASIN-BORROW-AR
Bingham Engineering
Design: FE, ese
Drawn: SJR
FEB. 1981
187-8
FIG. 26

ATTACHMENT 2

STATE OF UTAH
NATURAL RESOURCES & ENERGY
Water Resources

1636 West North Temple • Salt Lake City, UT 84116 • 801-533-5401

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Daniel F. Lawrence, Division Director

January 18, 1983

Jim Godlove
White River Shale Oil Corp.
Suite 500 Prudential Building
115 So. Main Street
Salt Lake City, Utah 84111

Jim

Dear Mr. Godlove,

We have discussed the problem associated with the clay borrow site with Bingham Engineering. They have reviewed the information you sent us concerning the availability of clay material in the borrow area.

Bingham Engineering has notified us that there is no problem with White River Shale Oil Corp utilizing the clay material that they identified in their report to us. We therefore have no concerns with you going ahead with your plan to utilize the clay material you have identified.

Sincerely,

Paul

Paul Gillette
Deputy Director

cc: Eric Hoffman
Dean Evans

embankment building and revegation has been completed, this material will be stored in areas where moderately sloping and naturally stable ridges exist. This fill will be placed to the side, or as an extension of a ridge, to provide a natural blend with the existing topography. Prior to fill placement, except for topsoil fills, these areas will be stripped of all topsoil and this topsoil will be stockpiled for reuse on the fill. The soil will be placed and compacted to provide a stable and well drained embankment. Surfaces will be graded to eleviate ponding and minimize erosion. The slope of these fills will not exceed 3H to 1V. A minimum of six inches of topsoil will be placed over the entire area prior to revegatation. All material within these fills will be nontoxic and nonacid forming. Each fill area will contain less than 250,000 cubic yards.

The exact configuration, location, and fill quantity for each storage area will be determinded jointly by the Holder, Contractor, and Authorized Officer prior to construction of the fill.

4.5 EROSION CONTROL

PURPOSE: The purpose of the Erosion and Sedimentation Control Plan is to define the techniques that will be used to control erosion and sedimentation.

PLAN: Erosion and sediment control structures and revegetation offer the most effective means of reducing erosion and preventing damage to both the construction area and off-site properties. Erosion and sediment control structures will be used whenever necessary and their design will be dictated by on-site conditions. Where temporary roads are installed in washes or known drainage areas, either fords (Arizona crossings) constructed at grade, or corrugated metal pipe drain structures, will be installed and sized to accommodate a 50-year 24-hour storm. Wash banks graded for temporary roads will be returned to as near their natural configuration as possible at the completion of all construction activities. Sedementation ponds will be breached and drained at the conclusion of construction unless otherwise directed by the Authorized Officer. Wind erosion will be controlled by spraying access roads, temporary roads, fill areas, and staging areas with water during ongoing construction activities. Long term control of erosion will be achieved by reestablishing vegetation on all disturbed land not being used for maintenance and emergency vehicle access (see section 4.6).

4.6 RESTORATION AND REHABILITATION

PURPOSE: The purpose of the Restoration and Rehabilitation Plan is to provide the necessary means for mitigating, as much as possible, the affects of construction.

PLAN: Disturbed areas will be restored and/or rehabilitated after the completion of construction operations. These areas will be reshaped, to the extent possible, to their approximate original configuration. The work will include waste removal, repair of existing facilities, and restoration of land surfaces and revegetation.

All existing fences, gates, cattleguards, etc. located on public land and damaged by contractors constructing the railroad will be repaired or replaced to the satisfaction of the Authorized Officer. These same facilities located on private properties will be repaired to the extent agreed to by the Holder. Existing easements for utility lines (gas, oil, power, and telephone) will be restored to the satisfaction of the Authorized Officer and the utility company.

All survey monuments and markers within the railroad transportation system project will be located, marked, and protected. If it is anticipated that a monument or marker will be disturbed, procedures outlined in Item 17, Exhibit A of the Right-of-Way Grant No. U-45319 and C-30118 will be followed. The Authorized Officer will be notified of any anticipated monument disturbances and will be responsible for providing information as to how to handle cadastral survey markers.

All access roads blocked as a result of the construction of the railroad will be rerouted or rebuilt as directed by the Authorized Officer. Conditions governing the use and repair of all

construct . temporary access roads by a. Contractors and the Holder shall be in accordance with the approved Transportation Plan detailed in Section 4.7.

Land surfaces disturbed by the construction activities will be restored, as nearly as possible, to their original state. As discussed in Section 4.4, the Unsuitable or Excess Material Storage Plan, and Section 4.2, the Clearing Plan, the methods for restoring and revegetation using existing materials native to the areas involved will be followed to the extent practical and allowable by the materials available. Topsoil removed and stockpiled during the initial construction activities will be spread to a minimum thickness of six inches over all disturbed areas where topsoil was originally removed. Topsoil will be spread with standard equipment.

Drainage patterns will be restored to the extent necessary for maintaining previously disturbed areas free of surface flow water. There are no known areas subject to mudflows, landslides, mudslides, avalanches, rock falls, and other types of mass movement within the railroad transportation corridor.

Disturbed lands will be revegetated according to success standards developed jointly by the Holder and the BLM, using the procedures appropriate to the area being seeded. Disturbed areas, where the topography permits, will be ripped on the contour prior to seeding. Contour furrows, drainage ditches, and water bars will be constructed prior to seeding, as directed by the Authorized

Officer. Seed, where topography permits, will be drilled utilizing a mechanical seed driller to a maximum of 1/2 inch deep. At locations where the topography does not lend itself to the use of mechanical equipment, the area will be hand raked, seeded by hand held equipment, and reraked, or have the seed applied with the mulch by hydro blower. Fertilizer will then be applied as required to enchance revegation success.

The seed mix to be utilized and application rate as specified by the BLM for the railroad transportation corridor will be as follows:

Lbs. of Pure Live Seed/Acre	Common Name (Variety)	Scientific Name
3	Siberian Wheatgrass (P-27)	Agropyron sibericum
3	Western Wheatgrass (Rosanna)	Agropyron smithii
2	Crested Wheatgrass (Nordan)	Agropyron cristatum
2	Russian Wildrye (Vinall)	Elymus junceus
1	Needle & Threadgrass	Stipa comata

Revegetation will be performed each fall following completion of a section of the railroad construction work. This will help to prevent the growth of undesireable weedy species. The time frame for revegetation will be October 1st through November 15th.

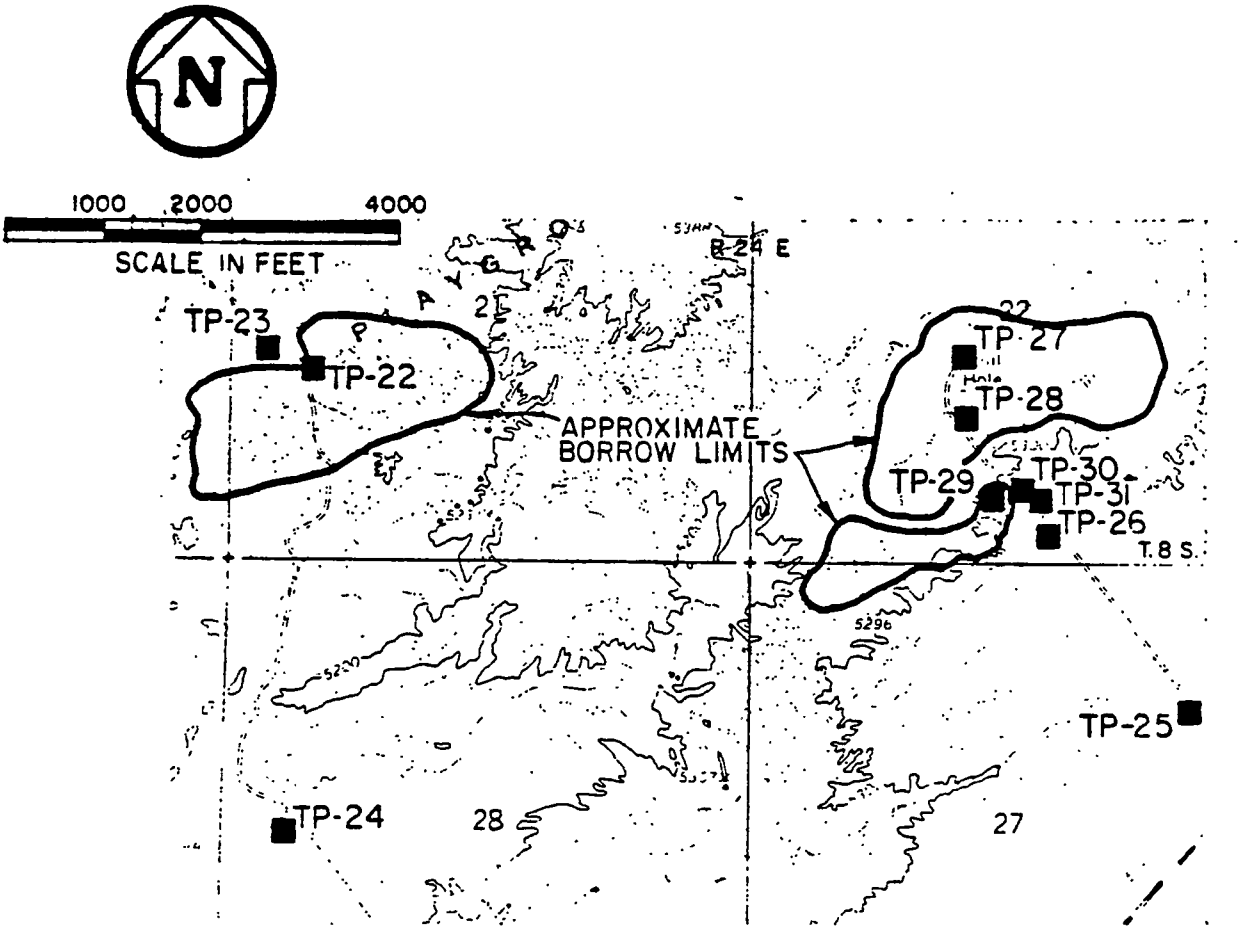
The revegetation success standard will be based on BLM trend plot data and/or other vegetation studies completed in the vicinity of the transportation corridor, subject to approval of the Authorized Officer.

4.7 TRANSPORTATION MANAGEMENT

PURPOSE: The Transportation Management Plan has been developed to supplement other plans contained in the Construction- Operations Plan. It also outlines measures to be followed by the Holder's Contractors in utilizing, improving or relocating existing BLM roads and trails, in making application for and constructing new access roads on BLM managed properties, in modifying existing state, county roads, and the measures needed to provide for the safety of the public and contractors in the use of these roads. The plan will cover all roads crossed or utilized along the 34.4 mile coal transportation system corridor between the rail loadout loop at the Deserado Mine and the Bonanza Power Plant.

PLAN:

1. To mitigate the adverse impacts of project related road use and construction activities on BLM managed land.



BORROW AREA C-3

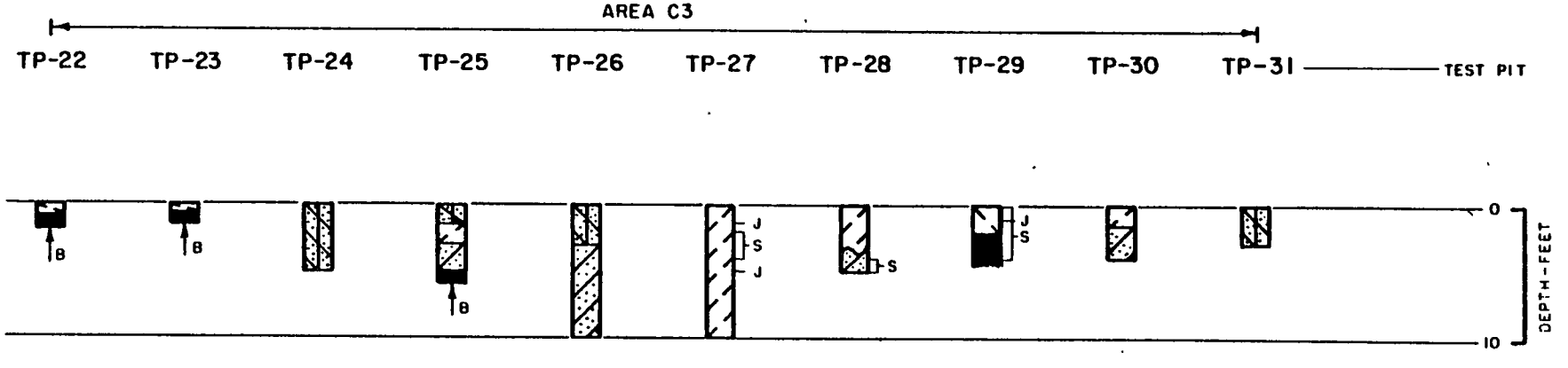
LEGEND

■ TEST PIT

NOTE: BASE MAPS FOR THE KEY MAP ARE FROM U.S. ARMY 1°x2° VERNAL AND GRAND JUNCTION QUADS. THE BASEMAP FOR SITES G-1 AND C-1 IS THE U S G S 7½ MINUTE SOUTHAM CANYON, UTAH, QUAD AND BASEMAPS FOR SITES C-3 AND C-4 ARE FROM U S G S 7½ MINUTE QUADS OF WEAVER RIDGE, UTAH-COLORADO AND BONANZA, UTAH.

Job No · 20813	LOCATIONS OF GRAVEL AND FINES BORROW AREAS AND TEST PITS
Prepared by · D W D / mmy	
Date: 5 / 20 / 82	III

ATTACHMENT 5



Job No. : 20813	SUMMARY LOGS OF TEST PITS
Prepared by: K E A	BORROW AREA
Date: 5/19/82	III

LEGEND

CLAY, SOFT TO MEDIUM STIFF, SILTY TO VERY SILTY, SLIGHTLY SANDY, SCATTERED FINE GRAVELS, OCCASIONAL ROOTS NEAR SURFACE, LOW PLASTICITY, SLIGHTLY MOIST TO MOIST, TAN, BROWN, RED-BROWN (CL, CL-ML).

CLAY, MEDIUM STIFF TO STIFF, SILTY, TRACE OF FINE SAND, LOW TO MEDIUM PLASTICITY, SLIGHTLY MOIST TO MOIST, RED-BROWN, GREEN (CL, CH).

SILT, MEDIUM DENSE, SANDY TO VERY SANDY, CLAYEY TO VERY CLAYEY, SLIGHTLY MOIST, BROWN (ML, ML-CL).

SAND, VERY LOOSE TO LOOSE, SILTY TO VERY SILTY, GRAVELLY, FINE TO COARSE GRAINED, OCCASIONAL ROOTS NEAR SURFACE, DRY TO SLIGHTLY MOIST, TAN, BROWN, RED-BROWN (SM).

SAND, MEDIUM DENSE TO DENSE, SILTY TO VERY SILTY, SLIGHTLY GRAVELLY TO GRAVELLY, LOCALLY VERY GRAVELLY, FINE TO COARSE GRAINED, DRY TO MOIST, BROWN, TAN (SM).

GRAVEL, MEDIUM DENSE TO DENSE, SANDY TO VERY SANDY, OCCASIONALLY SLIGHTLY SILTY, SCATTERED COBBLES, SLIGHTLY MOIST, BROWN (GP, GP-GM, GM).

CLAYSTONE, HARD TO VERY HARD, SILTY, OCCASIONAL INTERBEDS OF FINE SANDSTONE AND SILTSTONE, MODERATELY TO HIGHLY WEATHERED, MEDIUM PLASTICITY, SLIGHTLY MOIST TO MOIST, GREEN, RED (BEDROCK) (WASATCH FORMATION).

CLAYSTONE, HARD TO VERY HARD, SILTY, SANDY, OCCASIONAL LENSES AND LAYERS OF SANDSTONE, MODERATELY WEATHERED, DRY TO MOIST, GREEN, PURPLE (BEDROCK) (DUCHESNE RIVER FORMATION).

SANDSTONE, MEDIUM HARD TO HARD, CLEAN TO SILTY, SCATTERED CARBONACEOUS LENSES, THINLY BEDDED TO MASSIVE, NEARLY HORIZONTAL BEDDING WITH SCATTERED CROSS BEDDING, FINE TO MEDIUM GRAINED, MODERATELY WELL CEMENTED, MODERATELY TO HIGHLY WEATHERED, CLOSELY SPACED JOINTS, DRY TO SLIGHTLY MOIST, BROWN (BEDROCK) (UINTA FORMATION).

SANDSTONE, MEDIUM HARD TO VERY HARD, CLEAN TO SILTY, SCATTERED MARLSTONE, SILTSTONE AND CARBONACEOUS LENSES, THINLY BEDDED TO MASSIVE, NEARLY HORIZONTAL BEDDING WITH SCATTERED CROSS BEDDING, FINE TO MEDIUM GRAINED, MODERATELY TO VERY WELL CEMENTED, FRESH TO SLIGHTLY WEATHERED, WIDELY SPACED JOINTS, DRY TO SLIGHTLY MOIST, GRAY, BROWN (BEDROCK) (UINTA FORMATION).

MARLSTONE, HARD TO VERY HARD, SILTY, SANDY, SCATTERED SANDSTONE, SILTSTONE AND CARBONACEOUS LENSES, THINLY BEDDED, NEARLY HORIZONTAL BEDDING, FRESH TO MODERATELY WEATHERED ZONES, WIDELY SPACED JOINTS, DRY TO SLIGHTLY MOIST, GRAY (BEDROCK) (UINTA FORMATION).

6/12 INDICATES 6 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE A 2-INCH DIAMETER SAMPLER 12 INCHES.

INDICATES WATER LEVEL AND NUMBER OF DAYS AFTER DRILLING THAT MEASUREMENT WAS TAKEN.

INDICATES GRADUAL CHANGE IN MATERIALS. EXACT STRATA CHANGE NOT LOCATED.

INDICATES OPEN WELL PIEZOMETER INSTALLED IN TEST HOLE FOR THE INTERVAL SHOWN.

INDICATES PARTIAL LOSS OF DRILLING FLUID BEGINNING AT DEPTH SHOWN.

INDICATES TOTAL LOSS OF DRILLING FLUID BEGINNING AT DEPTH SHOWN.

100 INDICATES AVERAGE CALCULATED COEFFICIENT OF PERMEABILITY OF 100 FT/YR FOR THE INTERVAL SHOWN.

6.5 MIN. INDICATES AVERAGE RATE OF TIME FOR WATER TO FALL 1-INCH. PERCOLATION TEST PROCEDURE OUTLINED IN "MANUAL OF SEPTIC TANK PRACTICE", PUBLICATION NO. 526 U.S. DEPARTMENT OF HEALTH.

40,30 INDICATES NX SIZE CORE BARREL WAS USED TO ADVANCE HOLE. 40, 30 INDICATES 40 CORE RECOVERY FOR INTERVAL SHOWN AND ROCK QUALITY DESIGNATION (RQD) OF 30. RQD IS 100 TIMES THE LENGTH OF SOUND CORE OVER 4 INCHES LONG DIVIDED BY THE LENGTH OF RUN SHOWN.

S INDICATES SACK SAMPLE OF SOILS OBTAINED FROM THE INTERVAL SHOWN.

J INDICATES JAR SAMPLE TAKEN AT DEPTH SHOWN.

ST INDICATES 3-INCH DIAMETER SHELBY TUBE SAMPLE TAKEN FROM INTERVAL SHOWN.

CBR INDICATES A FIELD CALIFORNIA BEARING RATIO TEST WAS PERFORMED AT THE DEPTH SHOWN.

B INDICATES PRACTICAL BACKHOE REFUSAL AT THE DEPTH SHOWN.

Job No. : 20813	TEST HOLE AND TEST PIT LEGEND AND NOTES
Prepared by: L. R. N.	
Date: 5/28/82	III